

BookletChart™

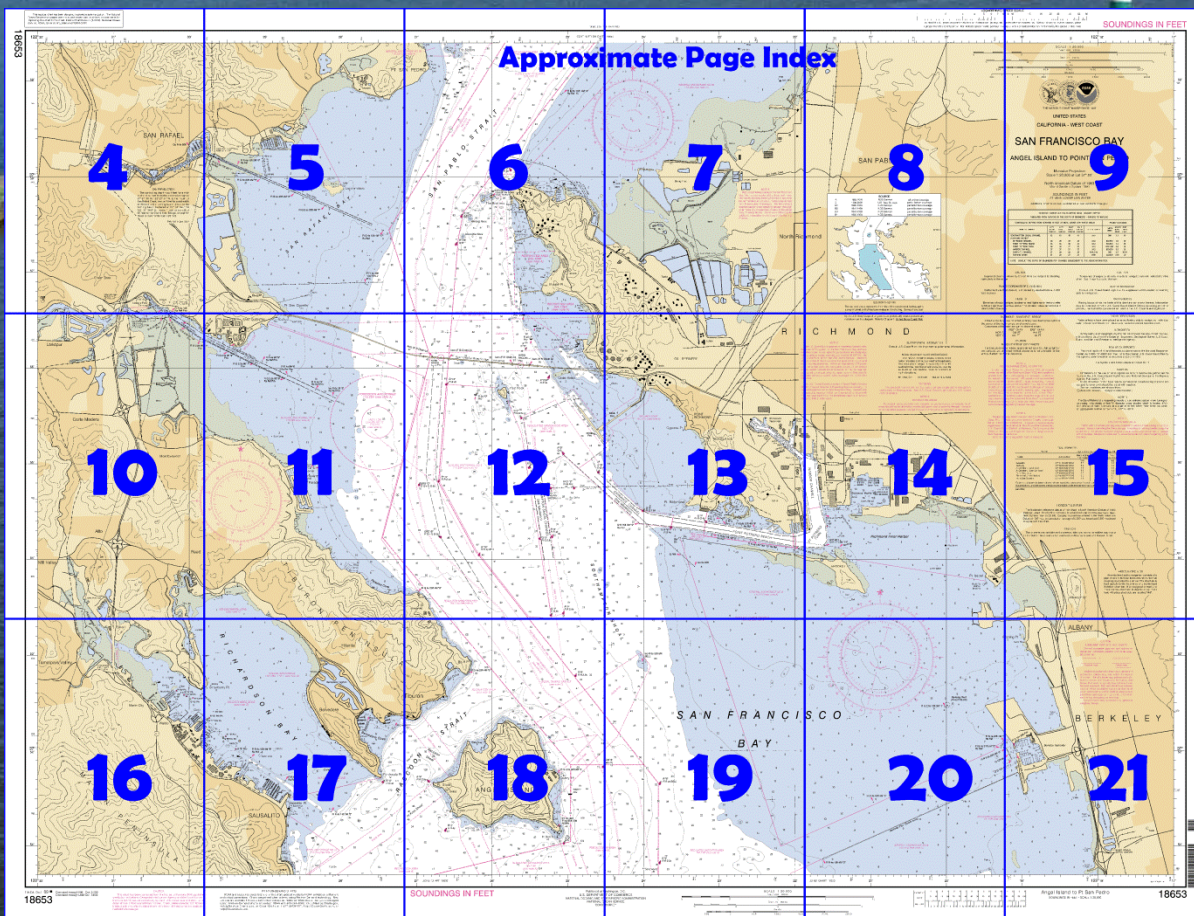


San Francisco Bay – Angel Island to Point San Pedro **NOAA Chart 18653**

A reduced-scale NOAA nautical chart for small boaters
When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=18653>.



(Selected Excerpts from Coast Pilot)
Berkeley, the site of the University of California, adjoins Oakland and **Emeryville** to the N. The long pier extending into the bay is marked by a light; the 1.7-mile offshore section of the pier is in ruins, and the inshore 3,000-foot section is used for fishing. **Berkeley Yacht Harbor**, on the N side of the long pier, is protected at the entrance by two detached breakwaters. The S breakwater is marked by lights on the ends and at the center. The N breakwater is

marked by a light on the NE and SW ends.

Southampton Shoal Light (37°52'55"N., 122°24'01"W.), 32 feet above the water, is shown from a white cylindrical tower near the S end of the 1.6-mile-long shoal. A sound signal (bell) is at the light.

Richmond Harbor, on the E shore of San Francisco Bay 1.5 miles N of Southampton Shoal Light, includes the port facilities to Point San Pablo. **Invincible Rock**, 1.3 miles N of Richmond-San Rafael Bridge, is covered 7 feet. **Whiting Rock**, covered 13 feet, is 0.2 mile NNE of Invincible Rock. Both rocks are buoyed. The buoy marking Whiting Rock is reported to submerge during strong ebb currents caused by the heavy spring runoffs in the area. Large vessels changing course and other craft in this area are advised to use caution.

The Brothers, 1.7 miles N of Richmond-San Rafael Bridge, are two small low flat-topped islands. **East Brother Island Light** (37°57'48"N., 122°26'01"W.), 61 feet above the water, is shown from a buff square tower on the E island; a seasonal sound signal is at the station.

Point San Pablo, 0.3 mile NE of East Brother Island Light, is the NW extremity of a low ridge of hills on the E shore of San Francisco Bay at its junction with San Pablo Bay. The point rises abruptly to a height of 140 feet. A dredged channel off the NE shore of the point is used by commercial and sport fishermen.

Richardson Bay, 2 miles N of the Golden Gate Bridge, is shoal except for the S part fronting Sausalito. In the N part of Richardson Bay, a wildlife sanctuary, established by the National Audubon Society, provides safe refuge for migratory fowl that arrives each fall. The sanctuary is closed to marine traffic from October to March. Seasonal buoys N of a line approximately 097° True from Strawberry Point to Belvedere, mark the perimeter of the sanctuary.

A **no-wake speed limit** is in all channels in Richardson Bay.

Sausalito harbors some commercial fishing boats and many pleasure craft. Several boatbuilding and repair yards have marine ways.

Point Blunt, the SE extremity of Angel Island, terminates in a 60-foot-high knob, and is connected with the island by a low neck of land. **Point Blunt Light** (37°51'12"N., 122°25'09"W.), 60 feet above the water, is shown from a white house on the point; a sound signal is at the station. A shoal with visible and covered rocks extends SSE for 0.1 mile. Tide rips and swirls are heavy around the point, especially with a large falling tide. A lighted buoy is off **Point Stuart**, the W extremity of Angel Island. A shoal area covered 14 to 30 feet, extending SW from **Point Knox**, is marked by a lighted buoy.

Raccoon Strait, nearly 0.5 mile wide between Angel Island and the mainland, is used by ferry boats and pleasure craft. The tidal currents in the strait have considerable velocity, and rips and swirls are heavy at times. A midchannel course can be followed. **Raccoon Shoal**, covered 29 feet, is 500 yards N of Raccoon Strait Lighted Buoy 4. A strong ebb current sets directly across the channel at the E entrance.

Point San Quentin, at the W end of the Richmond-San Rafael Bridge, has low land on either side. The buildings of the State Prison S of the bridge and the long wharf N of it are prominent. A State **security zone** extends off the SE side of Point San Quentin. The buoys are orange and white and display the words "San Quentin Prison."

San Rafael Creek, 1.8 miles NW of Point San Quentin, is used by many small craft basing at the city of **San Rafael**. A dredged channel leads across the flats of **San Rafael Bay** into San Rafael Creek to the Grand Avenue bridge, about 1.2 miles above the mouth; a turning basin is on the S side of the channel just below the bridge.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Alameda Commander
11th CG District (510) 437-3700
Alameda, CA

Navigation Managers Area of Responsibility



NOAA's navigation managers serve as ambassadors to the maritime community.

They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation. For additional information, please visit nauticalcharts.noaa.gov/service/navmanagers

To make suggestions or ask questions online, go to nauticalcharts.noaa.gov/inquiry.

To report a chart discrepancy, please use ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx.

Lateral System As Seen Entering From Seaward

on navigable waters except Western Rivers



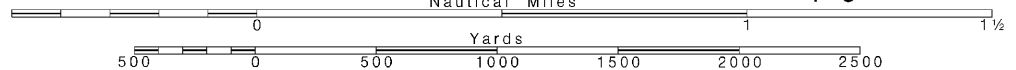
For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area.

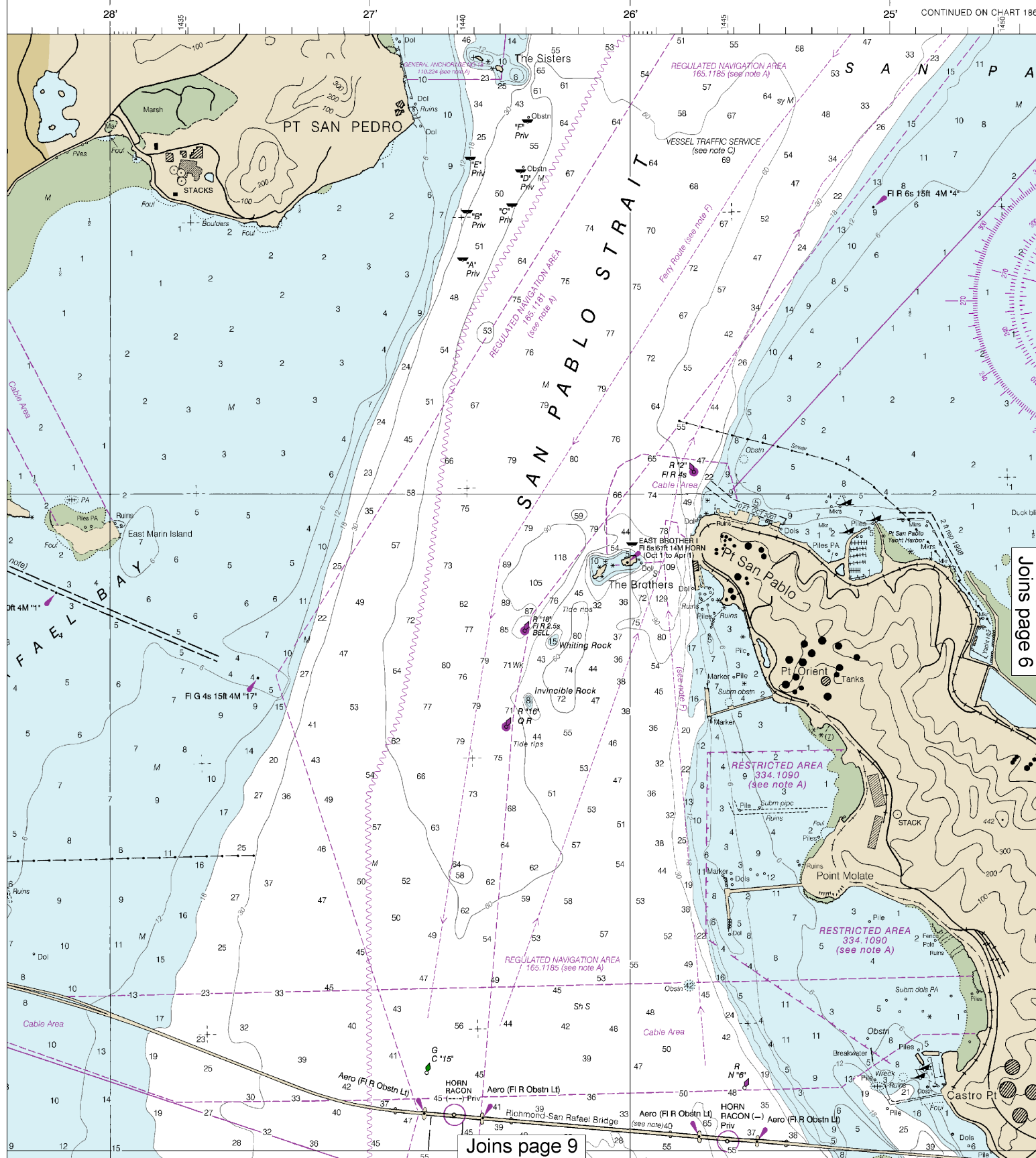
These volumes are available online at <http://www.navcen.uscg.gov>



Printed at reduced scale.

See Note on page 5.



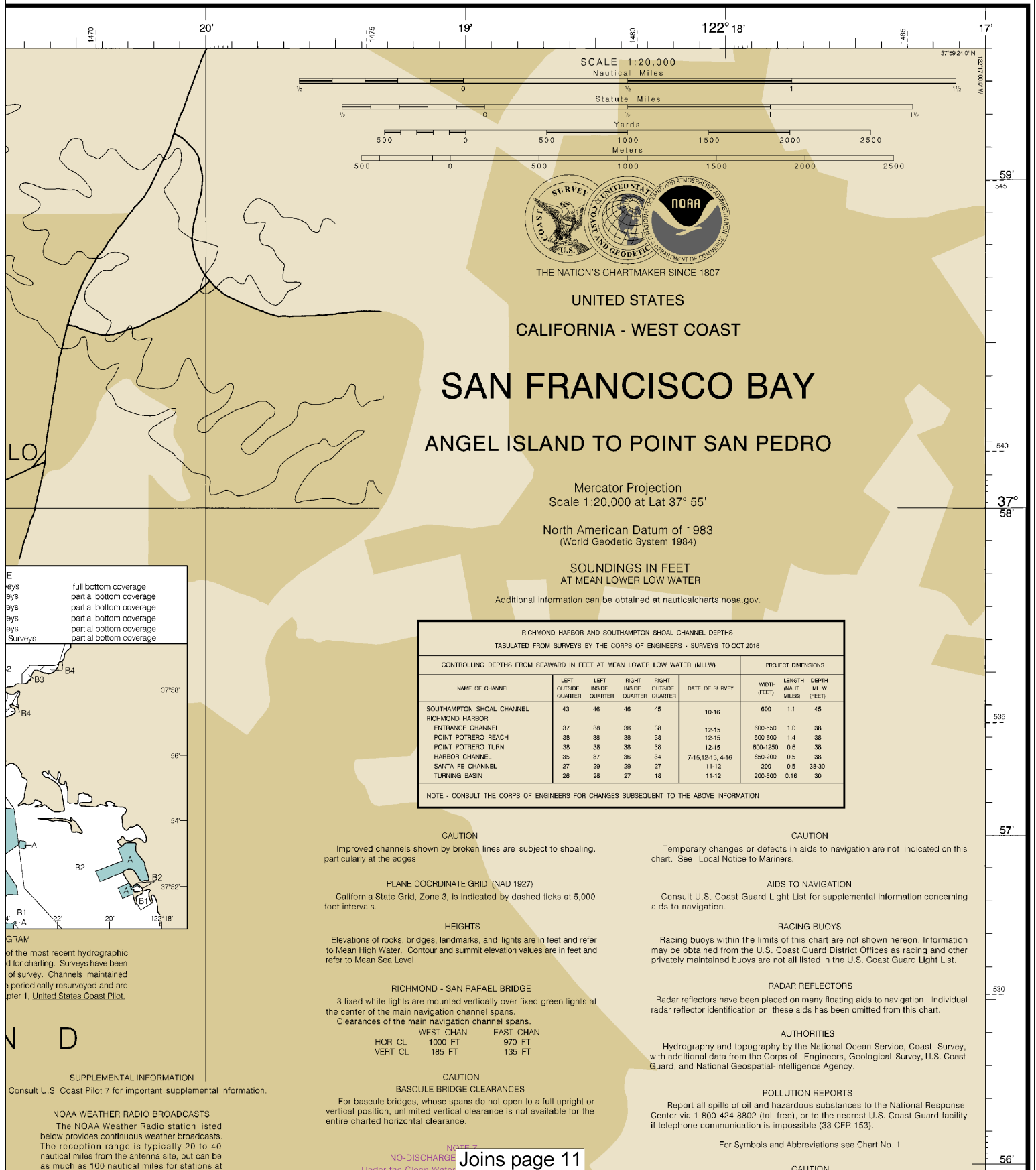


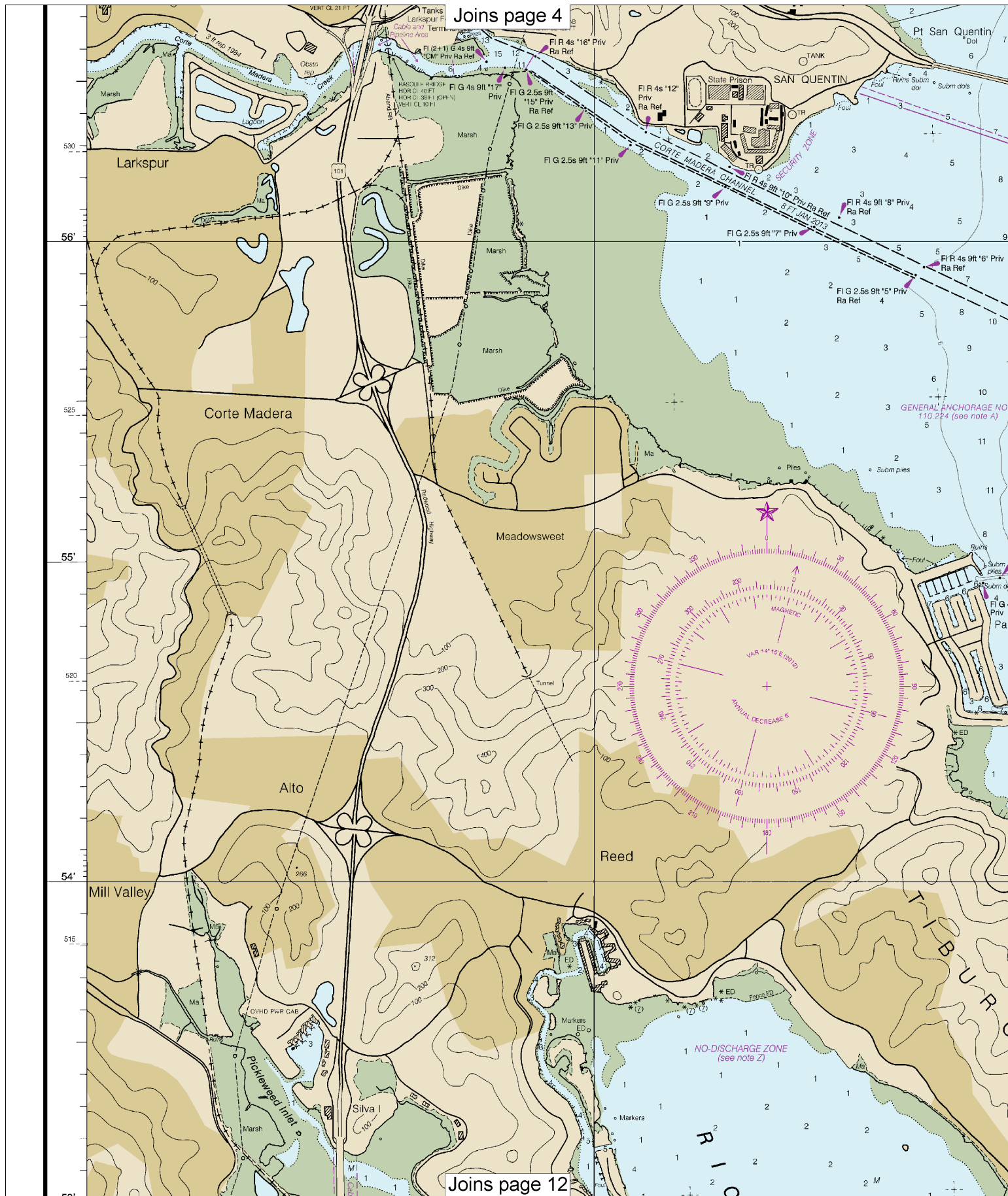
Joins page 6

Joins page 9

This BookletChart was reduced to 70% of the original chart scale.
 The new scale is 1:28571. Barscales have also been reduced and
 are accurate when used to measure distances in this BookletChart.

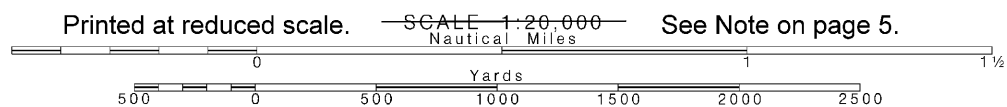




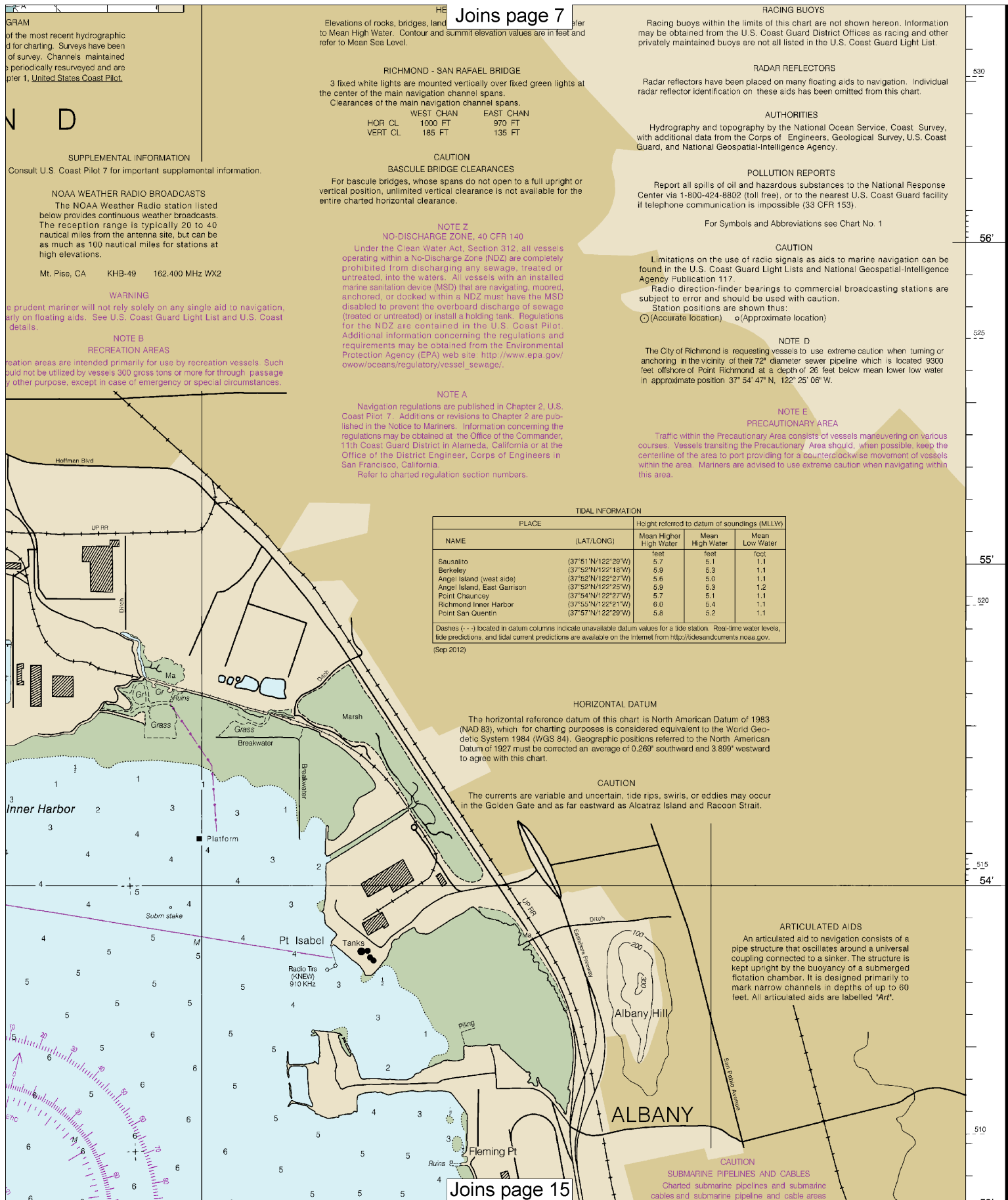


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Note: Chart grid lines are aligned with true north.







GRAM
of the most recent hydrographic
d for charting. Surveys have been
of survey. Channels maintained
periodically resurveyed and are
per 1, United States Coast Pilot.

N D

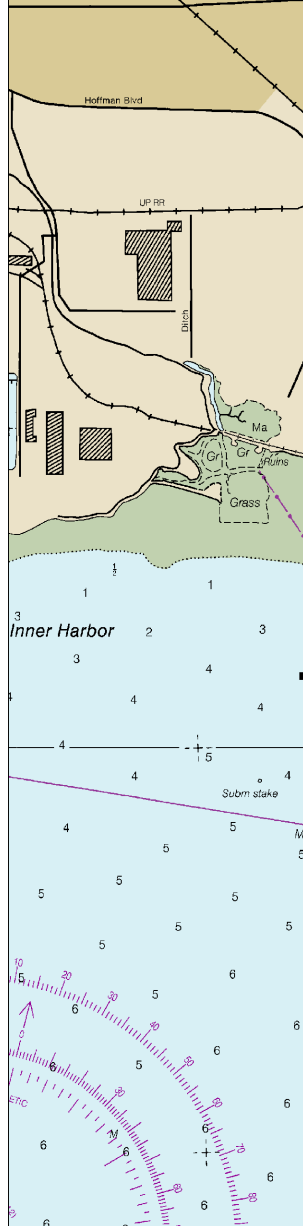
SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 7 for important supplemental information.

NOAA WEATHER RADIO BROADCASTS
The NOAA Weather Radio station listed
below provides continuous weather broadcasts.
The reception range is typically 20 to 40
nautical miles from the antenna site, but can be
as much as 100 nautical miles for stations at
high elevations.

Mt. Plise, CA KHB-49 162.400 MHz WX2

WARNING
A prudent mariner will not rely solely on any single aid to navigation,
early on floating aids. See U.S. Coast Guard Light List and U.S. Coast
details.

NOTE B
RECREATION AREAS
Recreation areas are intended primarily for use by recreation vessels. Such
should not be utilized by vessels 300 gross tons or more for through passage
or other purpose, except in case of emergency or special circumstances.



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Elevations of rocks, bridges, land
to Mean High Water. Contour and summit elevation values are in feet and
refer to Mean Sea Level.

RICHMOND - SAN RAFAEL BRIDGE
3 fixed white lights are mounted vertically over fixed green lights at
the center of the main navigation channel spans.
Clearances of the main navigation channel spans.

	WEST CHAN	EAST CHAN
HOR CL	1000 FT	970 FT
VERT CL	185 FT	135 FT

CAUTION
BASCULE BRIDGE CLEARANCES
For bascule bridges, whose spans do not open to a full upright or
vertical position, unlimited vertical clearance is not available for the
entire charted horizontal clearance.

NOTE Z
NO-DISCHARGE ZONE, 40 CFR 140
Under the Clean Water Act, Section 312, all vessels
operating within a No-Discharge Zone (NDZ) are completely
prohibited from discharging any sewage, treated or
untreated, into the waters. All vessels with an installed
marine sanitation device (MSD) that are navigating, moored,
anchored, or docked within a NDZ must have the MSD
disabled to prevent the overboard discharge of sewage
(treated or untreated) or install a holding tank. Regulations
for the NDZ are contained in the U.S. Coast Pilot.
Additional information concerning the regulations and
requirements may be obtained from the Environmental
Protection Agency (EPA) web site: http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/.

NOTE A
Navigation regulations are published in Chapter 2, U.S.
Coast Pilot 7. Additions or revisions to Chapter 2 are
published in the Notice to Mariners. Information concerning the
regulations may be obtained at the Office of the Commander,
11th Coast Guard District in Alameda, California or at the
Office of the District Engineer, Corps of Engineers in
San Francisco, California.
Refer to charted regulation section numbers.



RACING BUOYS
Racing buoys within the limits of this chart are not shown hereon. Information
may be obtained from the U.S. Coast Guard District Offices as racing and other
privately maintained buoys are not all listed in the U.S. Coast Guard Light List.

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual
radar reflector identification on these aids has been omitted from this chart.

AUTHORITIES
Hydrography and topography by the National Ocean Service, Coast Survey,
with additional data from the Corps of Engineers, Geological Survey, U.S. Coast
Guard, and National Geospatial-Intelligence Agency.

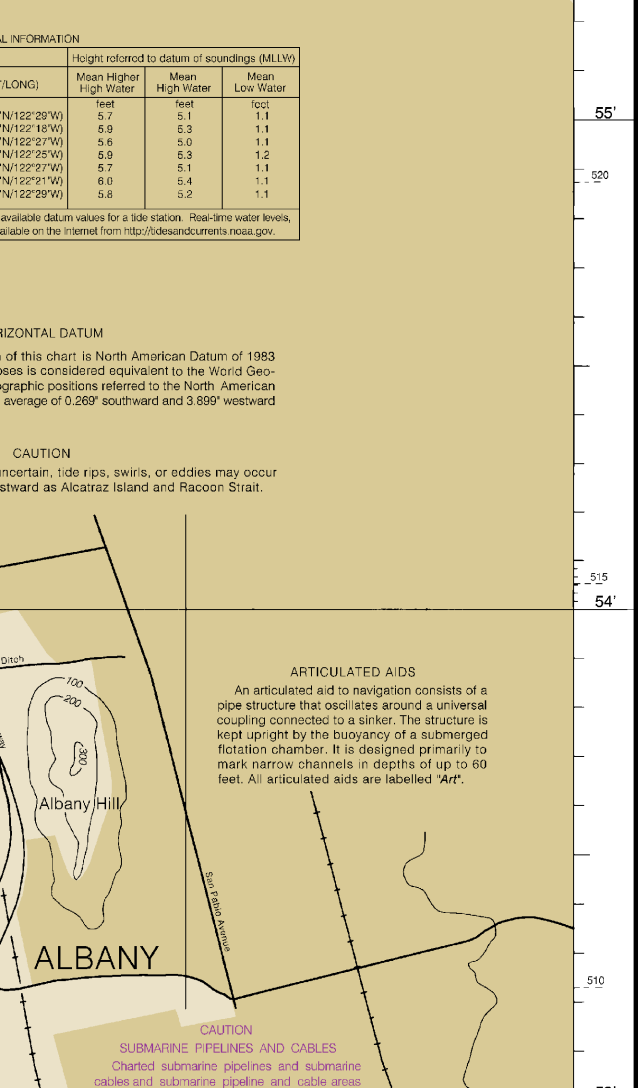
POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response
Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility
if telephone communication is impossible (33 CFR 153).

For Symbols and Abbreviations see Chart No. 1

CAUTION
Limitations on the use of radio signals as aids to marine navigation can be
found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence
Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are
subject to error and should be used with caution.
Station positions are shown thus:
○ (Accurate location) o (Approximate location)

NOTE D
The City of Richmond is requesting vessels to use extreme caution when turning or
anchoring in the vicinity of their 72" diameter sewer pipeline which is located 9300
feet offshore of Point Richmond at a depth of 26 feet below mean lower low water
in approximate position 37° 54' 47" N, 122° 25' 06" W.

NOTE E
PRECAUTIONARY AREA
Traffic within the Precautionary Area consists of vessels maneuvering on various
courses. Vessels transiting the Precautionary Area should, when possible, keep the
centerline of the area to port providing for a counterclockwise movement of vessels
within the area. Mariners are advised to use extreme caution when navigating within
this area.



TIDAL INFORMATION		Height referred to datum of soundings (MLLW)			
NAME	PLACE (LAT/LONG)	Mean Higher High Water		Mean Low Water	
		feet	feet	feet	feet
Sausalito	(37°51'N/122°29'W)	5.7	5.1	1.1	1.1
Berkeley	(37°52'N/122°18'W)	5.9	5.3	1.1	1.1
Angel Island (west side)	(37°52'N/122°27'W)	5.6	5.0	1.1	1.1
Angel Island, East Garrison	(37°52'N/122°25'W)	5.9	5.3	1.2	1.2
Point Chauncey	(37°54'N/122°27'W)	5.7	5.1	1.1	1.1
Richmond Inner Harbor	(37°55'N/122°21'W)	6.0	5.4	1.1	1.1
Point San Quentin	(37°57'N/122°29'W)	5.8	5.2	1.1	1.1

Dashes (---) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels,
tide predictions, and tidal current predictions are available on the Internet from <http://desandcurrents.noaa.gov>.
(Sep 2012)

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983
(NAD 83), which, for charting purposes is considered equivalent to the World Geo-
detic System 1984 (WGS 84). Geographic positions referred to the North American
Datum of 1927 must be corrected an average of 0.269' southward and 3.899' westward
to agree with this chart.

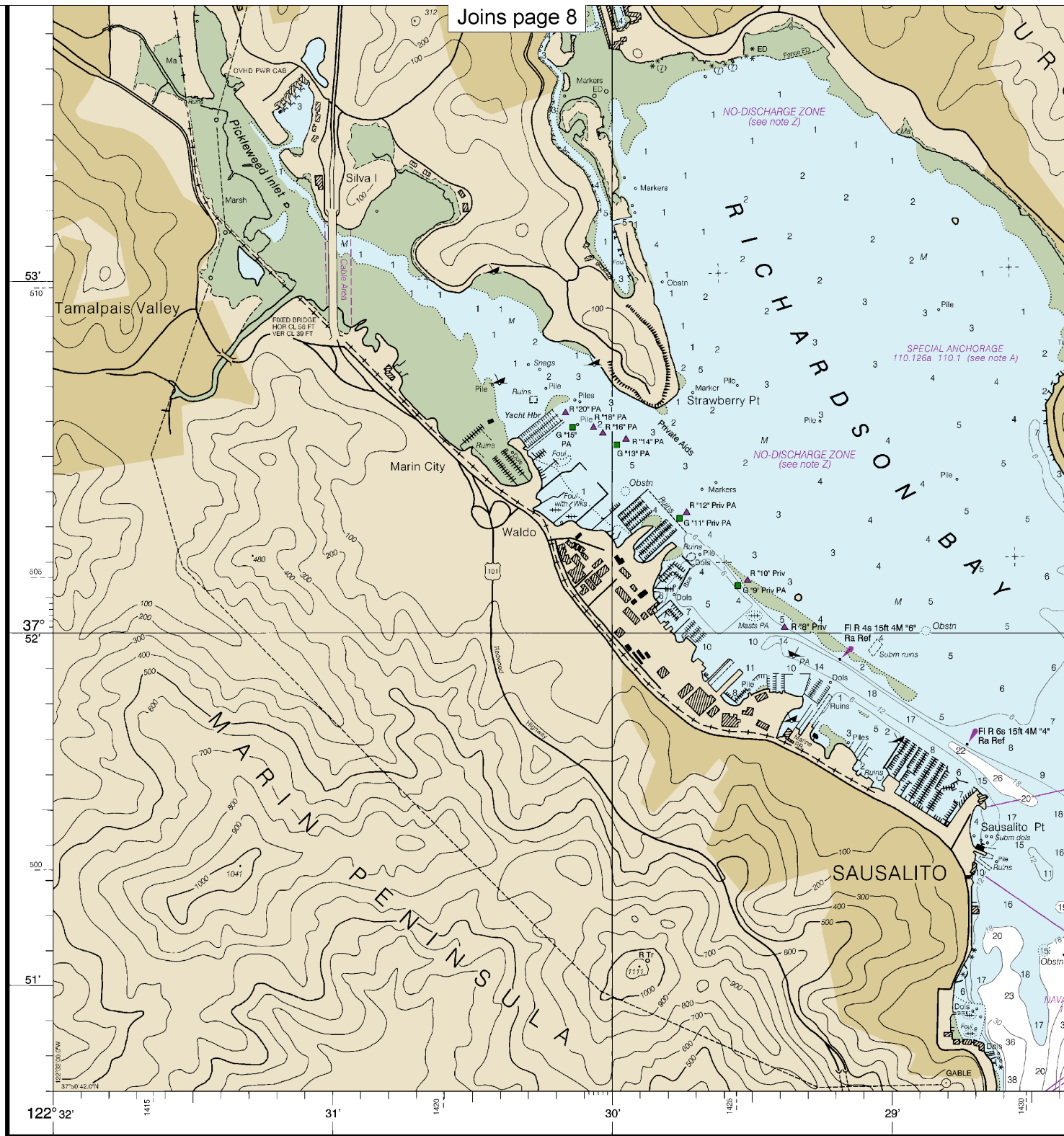
CAUTION
The currents are variable and uncertain, tide rips, swirls, or eddies may occur
in the Golden Gate and as far eastward as Alcatraz Island and Racoon Strait.



ARTICULATED AIDS
An articulated aid to navigation consists of a
pipe structure that oscillates around a universal
coupling connected to a sinker. The structure is
kept upright by the buoyancy of a submerged
floatation chamber. It is designed primarily to
mark narrow channels in depths of up to 60
feet. All articulated aids are labelled "Art".

CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine
cables and submarine pipeline and cable areas

Joins page 8



CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

18653

12th Ed., Oct. 2012. Last Correction: 12/7/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 5016 (12/10/2016)

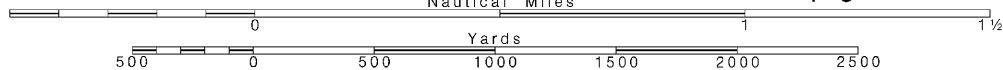
12

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:20,000
Nautical Miles

See Note on page 5.

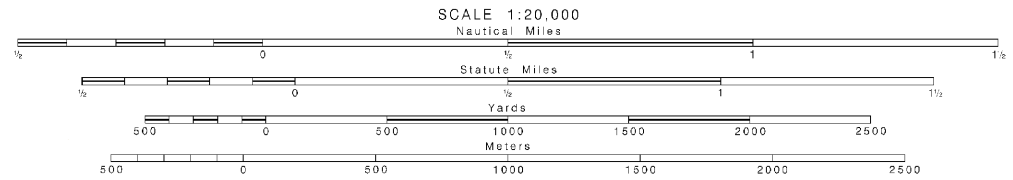




Joins page 13

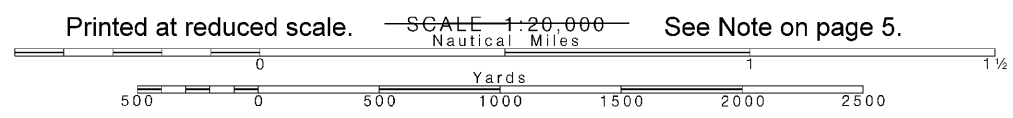
Joins page 10

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 DEPARTMENT OF COMMERCE
 NAUTICAL AND ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SERVICE
 COAST SURVEY

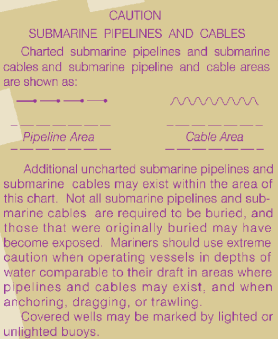


14

Note: Chart grid lines are aligned with true north.



See Note on page 5.



FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	0	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	100
METERS	1	0	8	1	5	6	7	8	0	10	11	12	13	14	15	16	17

Angel Island to Pt San Pedro
SOUNDINGS IN FEET - SCALE 1:20,000

18653



VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

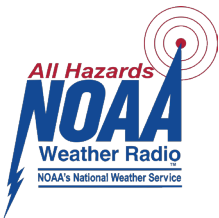
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

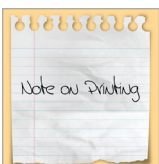
<http://www.nws.noaa.gov/nwr/>

Quick References

Nautical chart related products and information	—	http://www.nauticalcharts.noaa.gov
Interactive chart catalog	—	http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
Report a chart discrepancy	—	http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx
Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.